REMARKS

Claims 1, 3, 4, 6, 7, 9, 10, 12, 13, 15, 16 and 18-54 are pending where Claims 1, 3, 4, 6-7 and 53-54 have been considered by the examiner while the other claims are not considered by the examiner because they are species not elected by the applicant in response to the election requirements.

In the Office Action, the examiner rejected Claims 1 and 7 under 35 U.S.C. 102(e) as being anticipated by Lee (U.S. Patent Application Publication No. 2003/0112397). The examiner rejected Claims 4, 53 and 54 under 35 U.S.C. 103(a) as being unpatentable over Lee (U.S. Patent Application Publication No. 2003/0112397) in view of Watanabe (U.S. Patent No. 6,665,023). Further, the examiner rejected Claims 3 and 6 under 35 U.S.C. 103(a) as being unpatentable over Lee (U.S. Patent Application Publication No. 2003/0112397) in view of Suzuki et al. (U.S. Patent No. 6,407,791) and Watanabe (U.S. Patent No. 6,665,023). Accordingly, the applicant has amended the claims to overcome the rejection by the examiner.

Namely, with respect to the rejection to Claims 1 and 7, the applicant has amended independent Claims 1, 4 and 7 (and 10 as well) to more clearly differentiate the present invention from the technologies disclosed by the cited references. More specifically, the applicant has amended Claims 1, 4 and 7 (and 10 as well) to include the features that (1) a potential of the liquid crystal alignment direction control electrode currently placed in a lower layer of the slit of the transparent pixel electrode is set lower

than a potential of the transparent pixel electrode when a potential of the transparent pixel electrode separated for every pixel on the active matrix substrate side is lower than a potential of the facing flat common electrode on the color filter substrate side, (2) a potential of the liquid crystal alignment direction control electrode placed in a lower layer of the slit of the transparent pixel electrode is set higher than a potential of the transparent pixel electrode when a potential of the transparent pixel electrode is higher than a potential of the facing flat common electrode of the color filter substrate side; and (3) the polarities of the potential of the transparent pixel electrode and the potential of the liquid crystal alignment direction control electrode are reversed to a polarity of a potential of the flat common electrode in the color filter substrate side every vertical scanning period.

The cited Lee reference does not show such a specific relationship of potentials and polarities among the electrodes in the liquid crystal display.

Further, as discussed in the previous response to the office action, in the present invention, because the transparent pixel electrode and the liquid crystal alignment direction control electrode in each pixel of the active matrix substrate are driven separately and independently from one another, it is possible to make the size of the liquid crystal alignment direction control electrode small. This means that it is unnecessary to establish the liquid crystal alignment direction control electrode with use of

Indium-Tin Oxide (ITO), thereby enabling to form the liquid crystal alignment direction control electrode and the scan signal wiring on the same layer at the same time. As a consequence, because it is possible to produce the active matrix substrate of the present invention through the same production process for the conventional active matrix substrate, the production cost will not increase (see page 23, lines 26-29).

In contrast, in the active matrix substrate disclosed by the cited Suzuki et al. reference, both of the transparent pixel electrode and the liquid crystal alignment direction control electrode are made of ITO (column 10, lines 51-53, column 12, lines 41-56, column line 14 lines 17-18, etc.). This is because, as noted above, since the video signal supplied to the pixel electrode is transmitted to the control electrode connected to the thin film transistor (TFT) via the capacitance coupling, it is necessary to increase the size of the liquid crystal alignment direction control electrode. However, if the liquid crystal alignment direction control electrode of large size is established by a metal electrode, which is not transparent, the brightness will be deteriorated because of the decrease of the aperture ratio.

Thus, in the cited Suzuki et al. reference, it is necessary to use ITO for both the transparent pixel electrode and the liquid crystal alignment direction control electrode. Accordingly, it is not possible to form the liquid crystal alignment direction control electrode and the scan signal wiring on the same layer at the same

time, which increases the production process. Further, since ITO is expensive material, the production cost will increase.

The cited Watanabe et al. reference is completely silent about the slit (or circular or polygonal holes) with respect to the transparent pixel electrode let alone in the relationship with the the liquid crystal alignment direction control electrode or the potentials amnog the electrodes.

As discussed above, since the essential feature of the present invention is not shown or suggested by the cited references, the applicant respectfully submits that the rejections under 35 U.S.C. 102(e) and 35 U.S.C. 103(a) are no longer applicable to the present invention.

Respectfully submitted,

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